

zucker

L15 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2002 ACS

TI Synthesis of sulfonated poly(phenylene sulfide sulfone)s via direct polymerization.

SO Abstr. Pap. - Am. Chem. Soc. (2000), 220th, POLY-416
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AB Disodium 3,3'-disulfonate-4,4'-difluorodiphenylsulfone (SDFDPS) was synthesized by sulfonation of 4,4'-difluorodiphenylsulfone (DFDPS) with fuming sulfuric acid and neutralization with **sodium chloride** and sodium hydroxide. A series of novel poly (phenylene sulfide sulfone)s contg. pendant **sodium sulfonate** groups were prepd. by arom. nucleophilic substitution polycondensation of SDFDPS, DFDPS and Bis-(4-mercaptophenyl) sulfone. (Co)polymn. proceeded quant. to high mol. polymers at 160°C in presence of anhyd. potassium carbonate. The sulfonated polymers were sol. in dipolar aprotic solvents, such as N, N-dimethylacetamide and N-methyl-2-pyrrolidinone. Tough membranes with high sulfonate groups content cast from N, N-dimethylacetamide were obtained. Non-Aq. Potentiometric Titrn. and Intrinsic Viscosity Measurement indicate that acid form membranes are stable up to 220°C for >30 min in air and are candidates for 120 .apprx.150°C operation.

PY 2000

AU Wang, F.; Mecham, J. B.; Harrison, W.; McGrath, James E.